

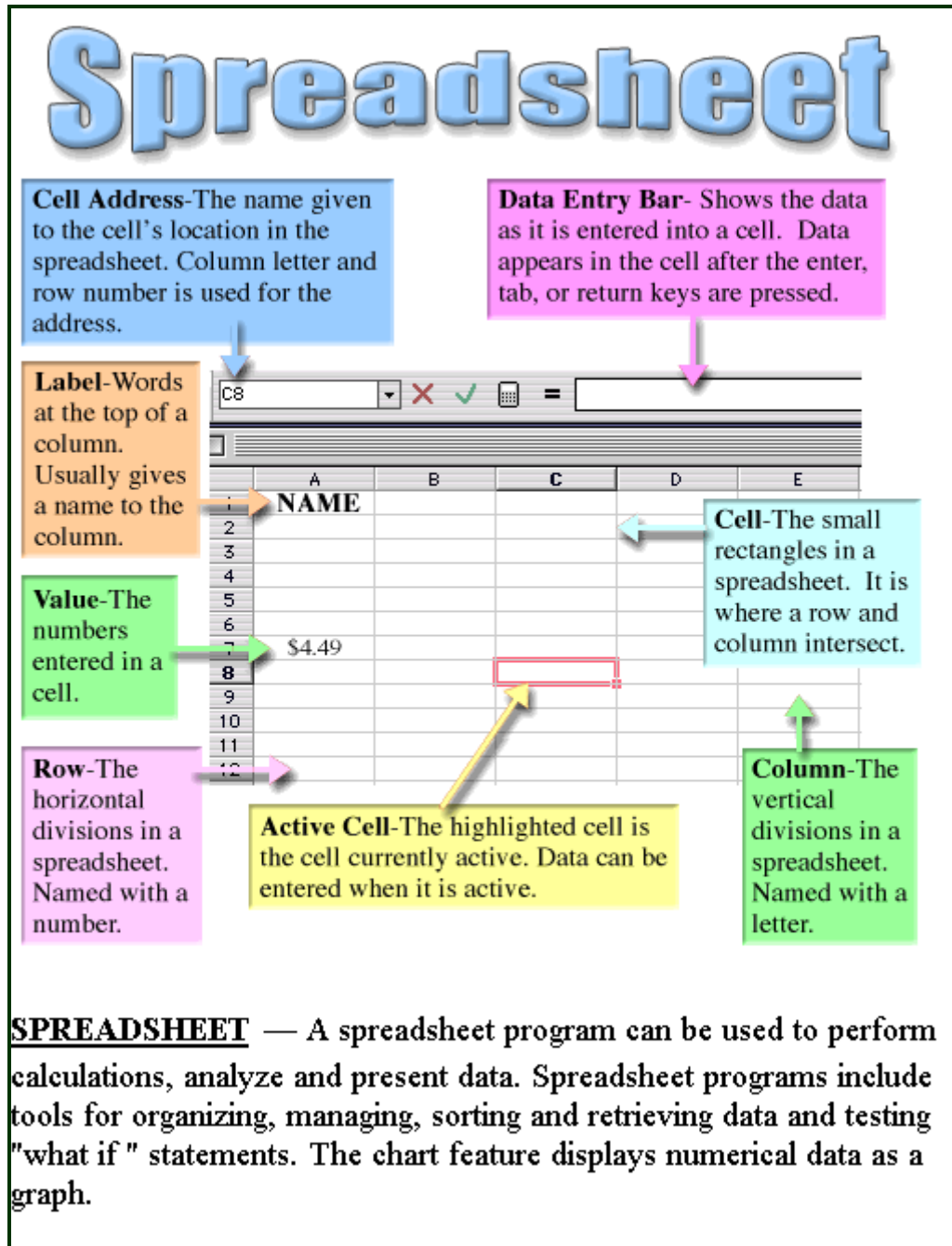
Microsoft Office— Excel in the Classroom

Dover Area School District
Tech Camp 2012





Spreadsheet Diagram



Source: Wheeler, Kay. "Computer skills mini-posters and activity sheets."
<<http://www.ncwiseowl.org/kscope/techknowpark/MiniPosters/Poster13.html>>.



EXPLORING A SPREADSHEET/WORKBOOK

M&M Activity

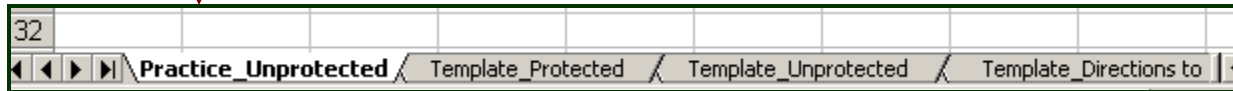
DIRECTIONS

Open file called MandM.xls


Create a folder (Excel in the Classroom) and save file in your “h” directory as **MandM_Practice**

Worksheet

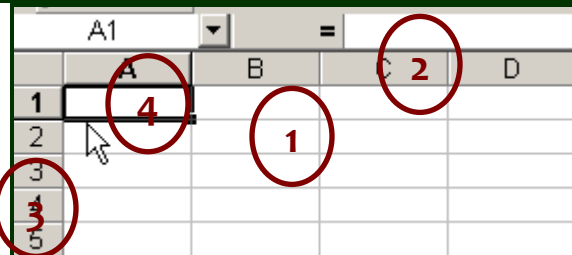
- Individual sheets
- The active worksheet is the one displayed on the screen and is also the one whose tab is shown in white at the bottom of the screen
- Is a grid of cells



Workbook

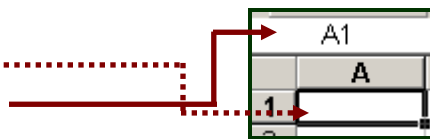
- The Excel file:  MandM.xls 48 KB Microsoft Excel ...
- May contain one or several worksheets
- All the worksheets within a workbook

1. **Grid**—divides worksheet into rows and columns
2. **Columns**—identified by letters (up to 256)
3. **Rows**—identified by numbers (up to 65,536)
4. **Cell**—intersection of a column and row



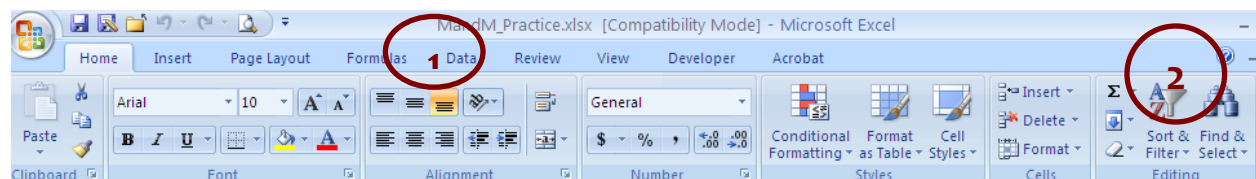
Active Cell

- Identified by black border
- Cell address also indicates the active cell



Toolbars

1. Menu toolbar—drop-down
2. Standard toolbar (called ribbon)



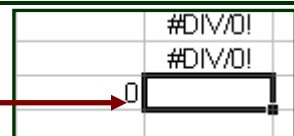
The toolbars shown above are the toolbars usually displayed by default. However, items available on the toolbars may change depending on what function, or application is being performed in cells on a worksheet.



NAVIGATING IN A SPREADSHEET/WORKSHEET

Below is a list, not all inclusive, of some more commonly used *keyboard keys* that can be used for navigating a spreadsheet. For a more thorough list, click *HELP* and then key *keyboard shortcuts*.

Arrow keys	Move one cell up, down, left or right
CTRL+arrow key	Move to edge of current data region
HOME	Move to beginning of the row
CTRL+Home	Move to the beginning of the worksheet
CTRL+END	Move to the last cell on the worksheet, last cell where text has been typed or a formula entered
PAGE DOWN or UP	Moves down or up one screen
ALT+PAGE DOWN	Moves one screen to the right
ALT+PAGE UP	Moves one screen to the left
F5	Displays the Go To dialog box
SHIFT+F5	Displays the Find dialog box
F2	Edit the active cell and put cursor at end of cell
ESC	Cancel an entry in the cell or formula bar
ENTER	Complete an entry in a cell
CTRL+C	Copy a selection
CTRL+V	Paste a selection
CTRL+X	Cut a selection
CTRL+Z	Undo the last action
SHIFT+arrow	Extend the selection a cell at a time





Formatting a Worksheet

If not opened, open [M&M.xlsx](#).

Sample of an Unformatted Worksheet

Colors	1	2	3	4	5	6	
Red							
Orange							

Sample of a Formatted Worksheet

① Color Distribution in a Bag of M&M's

② June 17, 2012

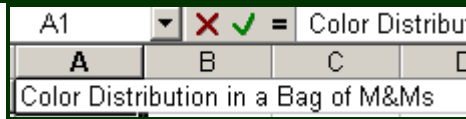
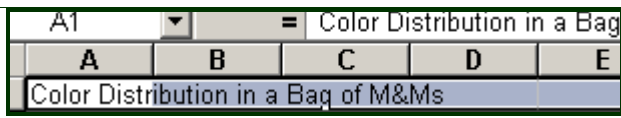
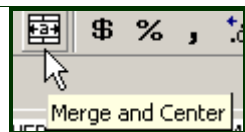
Colors	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Group 7	Group 8
Red								
Orange								

① Merge and Center Title

- Key title in Cell A1
- Click green checkmark

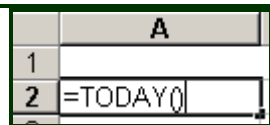
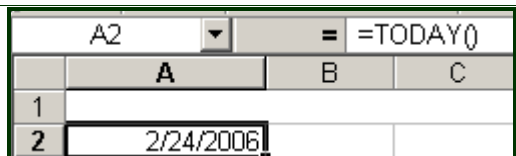
② Highlight A1 to L1

- First highlighted cell is white; remaining highlighted cells are blue
- Click the merge and center icon
- Do any other desired formatting such as bold, font, point size

② Inserting the CURRENT Date

- Click in A2
- Key an equal sign and then the formula **=TODAY()** in A2 (that's a left/right parenthesis with no space)
- Click green checkmark
- The formula now appears in the *data entry bar* and the current date appears in A2



- Click in A2
- Click *Format/Cells/Number/Date*
- Select the desired date format
- Follow Step 1 above to merge over A2:L2



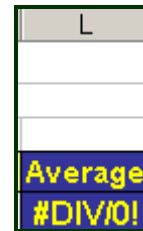
Note: For the time being, ignore the ## signs that may appear in A2—this will not happen after merging the cells

Sample of a Formatted Worksheet (Continued)

③

Column Headings and
Average Column

- Click in A4
- Highlight A4 to K4
- Format to your choosing—sample to right shows a fill, font color change, bold and center
- Format L4 to L12 with formatting of your own choosing—see example to right



- Select A13 to L13—column totals
- Format to your own choosing



NOTE:



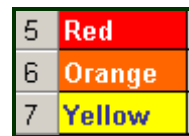
Paint can fills cells

"Colored" letter changes font color

④

Fill Cells

- Fill each of the cells, A5:A11 with an appropriate color



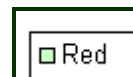
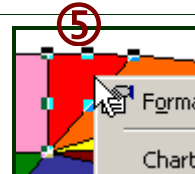
④

⑤

Changing color of the
pie graph pieces

- If the legend and the pieces of the pie chart do not match the fill colors in cells A5:A11, they can be changed

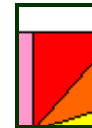
- Right mouse click on a piece of the pie
- Left mouse click *Format Data Point*
- Select the desired color on the color chart
- Click OK—the legend color and the pie piece should change



OR



- Right mouse click the small legend box color
- Left mouse click on *Format Legend Key*
- Select the desired color and OK
- Legend and piece of pie both change



Entering Data and Numbers

TEXT

If not opened, open [M&M.xlsx](#).

①

Entering Text

In Excel, text consists of any set of characters containing

- Letters
- Hyphen (i.e. telephone numbers)
- Spaces

Samples of text used in Excel

Titles/subtitles

Color Distribution in a Bag of M&M's
March 6, 2006

Column titles (headings)

Group 1	Group 2

Row titles

5	Red
6	Orange
7	Yellow

Accepting Text in Cells

Note: Unless one of the following is used after text is keyed in a cell, the text is not actually accepted in the cell

Depress the ENTER Key—the cursor moves DOWN one cell

Cell before ENTER depressed

test

- The "black" box around test indicates the cell is active and text has not been accepted

Cell after ENTER depressed

test

- The word "test" is accepted and by depressing enter the cell below test is now active—black box indicates this

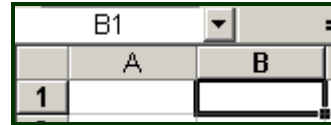


Accepting Text in Cells (Continued)

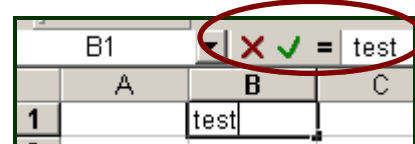
Clicking the green checkmark—the green checkmark appears only when text is being entered into a cell

When the green checkmark is clicked after text is typed, the cursor remains in the cell in which text was typed (unlike the ENTER key which moves the cursor to the cell below)

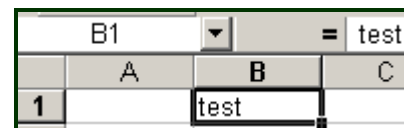
Cell B1 *before* text is entered



Cell B1 *as* text is being entered



Cell B1 *after* text is typed and green checkmark clicked (Notice the green checkmark has disappeared but the black box remains around B1 indicating it is still the active cell)



②

Correcting Mistakes

If a wrong letter is keyed *before* the ENTER key is depressed . . .

Use the BACKSPACE key to erase characters

To *cancel* the keyed text before the ENTER key is depressed. . .

Press the ESC key in upper left corner of keyboard

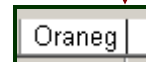
If the ENTER key has already been depressed, to correct errors . . .

- Click in the cell to be corrected
- The text appears in the *formula bar*

Note: If the cursor is to remain in the cell that is corrected, click the green checkmark; if not, depress ENTER on the keyboard



- Click where (behind) the error is; a vertical bar will appear indicating the positioning of the cursor
- Backspace to correct and retype





NUMBERS

③

Entering Numbers

- Numbers can be entered into a cell to represent amounts
- Numbers, representing amounts, can contain only those characters 0 1 2 3 4 5 6 7 8 9 + - () , / . \$ % E e shown to the right
- If a cell contains any other keyboard characters with numbers, Excel interprets the data as text

Entering Numbers as Text

There may be times when numbers are to be entered but not used as calculations—i.e. ZIP codes, telephone numbers

Key an apostrophe ' at the start of the entry

'17356

'292-3671

Alignment of Numbers

- By default, Excel right aligns numbers in a cell
- To change the alignment highlight the cell(s) and click the





To Sum Numbers

SUMMING COLUMNS (ROWS ARE DONE THE SAME WAY BUT THE TOTALS ARE SUMMING HORIZONTALLY RATHER THAN VERTICALLY)

If not opened, open [M&M.xlsx](#).

Place cursor in cell that should contain the summation

Sample is Cell B13

13	Total	
----	-------	--

Click the AutoSum button on the toolbar



- B13 will display **=SUM(B5:B12)**
 - B5 indicates the first cell to be included
 - The colon (:) acts as a range (B5 through B12)
 - B12 is the last range
- NOTE there is a blank row that is included in the summation—this is recommended so if rows need to be added the formula automatically adjusts to include the added rows
- A green checkmark appears when AutoSum is selected
- Click the green checkmark to accept the formula
- The checkmark disappears and the sum appears

Colors	One	Two
Red	2	
Orange	4	
Yellow	6	
Brown	8	
Blue	10	
Green	12	
Pink	14	
Total	=SUM(B5:B12)	

✗	✓	=	=SUM(B5:B12)
---	---	---	--------------

13	Total	56
----	-------	----

What I F the cell range is not correct?

In the sample show to the right, the cell range is incorrect. The "1" to the right of Colors is a column head and not part of the summation.

- Click in the formula bar and delete the incorrect number and change to correct

✓	=	=SUM(B4:B12)
---	---	--------------

- In the above sample the 4 should be a 5

✓	=	=SUM(B5:B12)
---	---	--------------

- Click the green checkmark

4	Colors	1	Two
5	Red	2	
6	Orange	4	
7	Yellow	6	
8	Brown	8	
9	Blue	10	
10	Green	12	
11	Pink	14	
12			
13	Total	=SUM(B4:B12)	
14			

Notice Several Things About the Cell Containing the Summation Formula

- Cell B13 displays the summed amount
- The formula bar does not display "56" but shows the formula

B13	=	=SUM(B5:B12)	②
13	Total	56	①



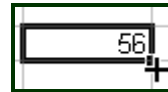
COPYING THE FORMULA

- In this sample, Cells C13:K13 should have the AutoSum
- The easiest way to accomplish this is to copy the formula from B13

13	Total	56		
----	-------	----	--	--

To Copy the Formula

- Click in the cell containing the formula (B13)
- Position cursor in lower right corner of cell
- Cursor turns into a thin plus sign (*fill handle*)



- Hold down left mouse
- Drag mouse across cells C13:K13
- The cells have a dotted border
- Release mouse on cell K13
- IF numbers were keyed in C5:K11, the sums will appear; if no numbers have been keyed, zeroes will appear



56	0	0
----	---	---

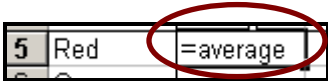
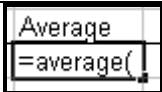
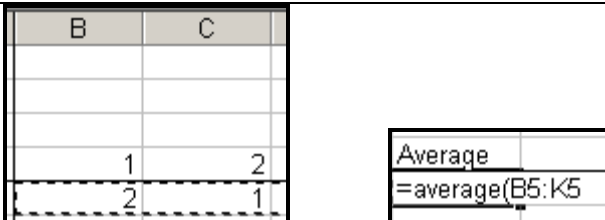
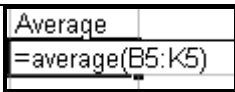
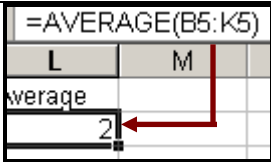
Click in C13 and notice how the formula automatically adjusted to the correct cells. The formula displays the C5:C12

=	=SUM(C5:C12)
C	D
0	

Average Formula

If not opened, open [M&M.xlsx](#).

Cell L5:L12 need to have an average formula so the average can be determined of Cells B5:K12.

<ul style="list-style-type: none"> Click in L5 Because a formula is going to be entered, an equal sign must be keyed first—this alerts Excel to the fact a formula is being entered. The word <i>average</i> is typed 	
<ul style="list-style-type: none"> Type an open parenthesis (shift of the number 9 key) 	
<ul style="list-style-type: none"> Click in cell B5 Hold down left mouse Drag to cell K5 A dotted line appears 	
<ul style="list-style-type: none"> Type a closed parenthesis (shift of the number 10 key) 	
<ul style="list-style-type: none"> Click the green checkmark The average appears Note the cell contains the average number but the formula bar contains the formula 	
Copy the formula following the steps on Page 15	



Minimum Formula

KEYING IN FORMULA MANUALLY

If not opened, open M&M.xls.

Key the word **Minimum** in M4

	M
4	Minimum

Click in M5

	M5
	M
4	Minimum
5	

Key **=min(** in M5

	M
4	Minimum
5	=min(

- Drag mouse over cells B5 to K5—dotted line appears around selection[†]
- Formula bar displays **=min (B5:K5**
- Click green checkmark—after clicking the closed parenthesis will appear and the checkmark will disappear to the left of the formula bar

	B	C	D	E	F
4	One	Two	Three	Four	
5	1	2	3	1	

	M	N
	Minimum	
	1	

[†] B5 is the first cell containing data to be included in the formula and K5 is the last cell containing data to be included in the formula. These numbers will vary depending on each spreadsheet

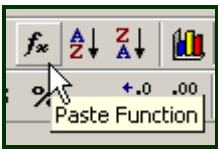
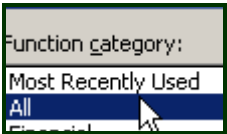
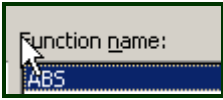




Copy formula down to M12 (Refer to Page 15 for copying directions)

	M
	Minimum
	1



USING THE PASTE FUNCTION

Excel has a *paste function* icon on the standard toolbar that can be used to create a formula. After keying the word **Minimum** in M4, follow the directions below to use the paste function.

<ul style="list-style-type: none"> Click in M5 Click the paste function icon 	
Click All under Function Category :	
<ul style="list-style-type: none"> Click in the Function name column Type min—cursor should jump to min Click OK 	 
<ul style="list-style-type: none"> A box appears indicating, for this example, that the cells being selected are B5:L5. This is not correct because the M column should not be included Click the icon shown here  Drag across B5 to L5 Click the icon again Click OK 	 <p>Box can be moved by dragging with left mouse!</p> 

Maximum Formula





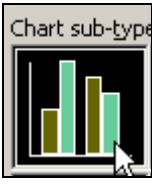

The maximum formula is created the same way the minimum formula is created. Refer to pages 17-18. The only difference is **max** is keyed rather than min. Using the M&M.xlsx file, try creating a maximum formula in Column N.

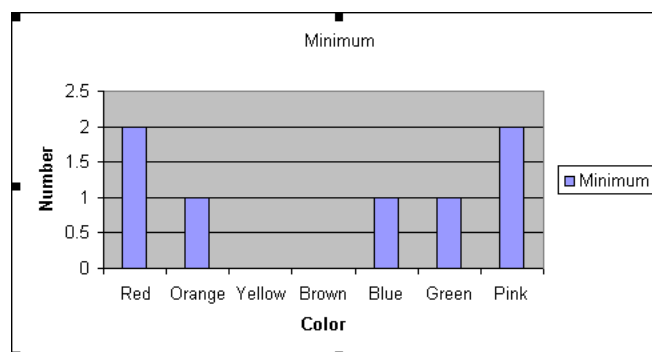


Creating a Chart

COLUMN CHART--MINIMUM

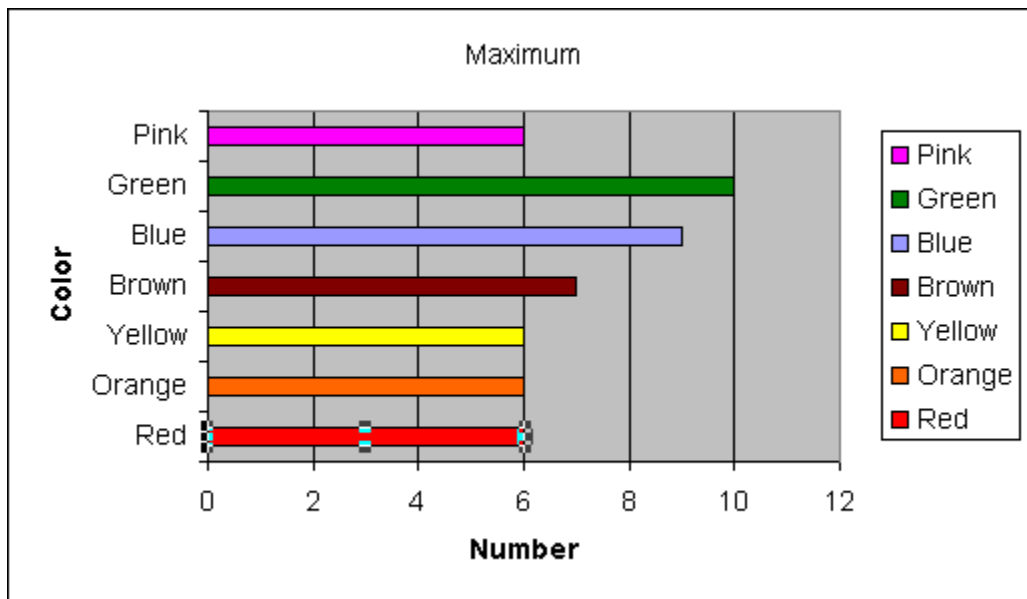
If not opened, open [M&M.xlsx](#). The following directions assume the **MandM** file has the average, minimum and maximum formulas added and copied to the cells.

<ul style="list-style-type: none">• Select cells A4:A11• Hold down CTRL key on keyboard and select cells M4:M11• Click the Insert menu and 	 <div><p>Excel 2007 no longer has the chart wizard. The chart options are now included under the INSERT menu.</p></div>
Select the Column under Chart type:	
<ul style="list-style-type: none">• Select the first option in the upper left corner under chart sub-types• NOTE the bottom of the dialog box gives an explanation of the chart type• Click Next twice 	 <div><p>Clustered Column. Compares values across categories.</p></div>
<ul style="list-style-type: none">• Key <i>Color</i> for the X axis• Key <i>Number</i> for the Y axis• Click Finish	
<ul style="list-style-type: none">• The chart can be moved to a new location on the spreadsheet• The chart can be resized (use corner "black" handles)• The bars can be recolored (right mouse click to format)	





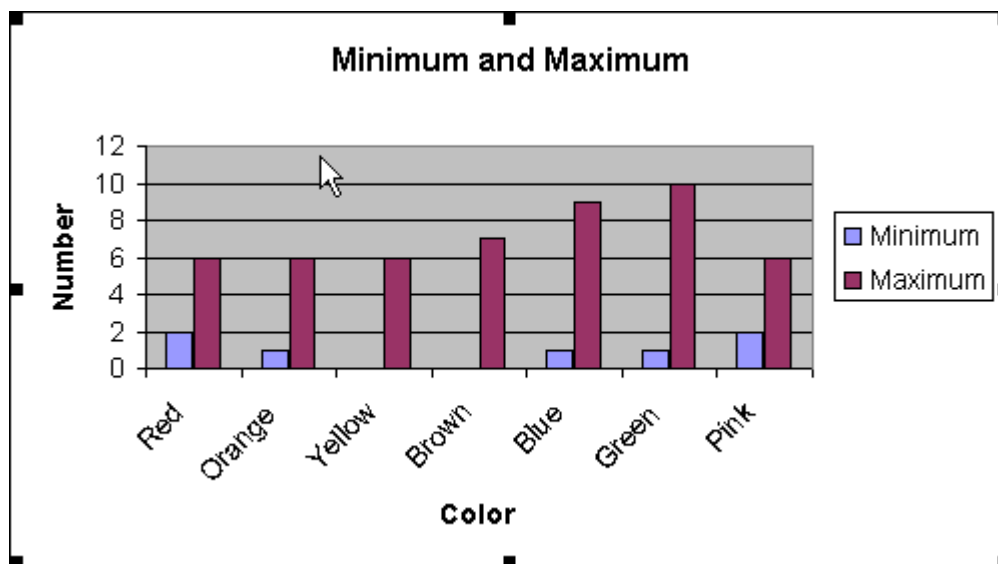
Try creating a pie chart or a bar chart using the maximum column.



COMMENTS ON THE ABOVE CHART

- Chart had to be resized larger so all color names would display
- Colors were added to each of the bars
- The color is actually the X axis
- The number is the Y axis

Try creating a column chart but select both the *minimum* and *maximum* columns.





"Simple" IF Function

What are IF statements in Excel?

- Checks the *condition of a logical statement*
- If true returns one value
- If false returns another value
- Can have up to seven nested IF functions

Values may be either text or numbers

If text the text must be placed inside quotation marks

Syntax for a single (not nested) IF statement is:

=IF (condition, value-if-true, value-if-false)

- The formula can be keyed manually
- The formula can be created by the paste function



SAMPLE IF STATEMENT KEYED MANUALLY

	A	B		A	B
1	Price	More Than a Dollar?		Price	More Than a Dollar?
2	\$ 0.50	No		0.5	=IF(A2>1,"Yes","No")
3	\$ 1.01	Yes		1.01	=IF(A3>1,"Yes","No")
4	\$ 0.99	No		0.99	=IF(A4>1,"Yes","No")
5	\$ 2.00	Yes		2	=IF(A5>1,"Yes","No")

Breaking Down the Formula		Key	=IF	can be lowercase
		Key	(Shift of No. 9 key
Either Key or drag mouse over the desired cell			A2	
	Key condition (i.e. = < > ...)		>	greater than [shift of comma]
	Key criteria for condition		1	
	Key a comma		,	
TRUE: ONLY IF returned value is text, key quotes			"Yes",	Commas are before/after quotes
False: the last part of the formula			"No"	
	Key)	Shift of No. 0 key

After formula is keyed, click the green checkmark

=IF(A2>1,"Yes","No")
<div>Condition</div> <div>True</div> <div>False</div>



SAMPLE IF STATEMENT USING PASTE FUNCTION

		A	B	
	1	Price	More Than a Dollar?	
	2	\$ 0.50		
	3	\$ 1.01		

<p>Click in A2</p> <p>Click on Paste Function under Formulas menu</p> <p>Click ALL under Function Category</p> <p>Select IF under Function Name</p> <p>Click OK</p>	
<p>(Box can be moved to another position on screen)</p>	
<p>Logical Test: Key A2>1</p>	
<p>True and False</p> <p>Click in the respective boxes and key Yes for true and No for false</p> <p>Click OK</p>	
<p>Copy formula to other cells</p> <p>Release mouse and dotted border will disappear</p>	

ONE NESTED IF STATEMENT SAMPLE

Open the file **Self-Check Study Sheet.xls**

Notice D7 contains "Oops, Try Again" but the other cells in column D do not	
Notice the formula in D7	
Notice the formula in D4	
<p>The =IF(C4="", "", ... Again!)) means if C4 is blank, don't put anything in the cells—keep the cells blank</p> <p>Notice the two closing parentheses—for every open parenthesis there must be a closing parenthesis</p> <p>=IF(C4="", "", ... Again!)) , if(C4=6,... Again!))</p>	

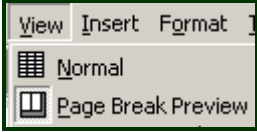

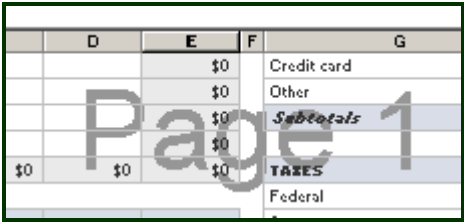
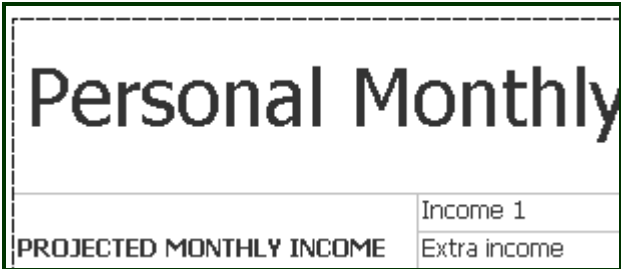


Views in Excel

PAGE BREAK VERSUS NORMAL VIEW

Open the file [Personal Monthly Budget_A.xls](#)

Sometimes when Excel files are sent from other parties, the document may open in *page break view*.

<p>To change views click on</p> <ul style="list-style-type: none"> • View • Select view desired <p>OR</p> <p>Click one desired icon in lower right of Excel screen</p>	 
<p>File in Page Break View (this view shows the pages if more than one page)</p>	
<p>File in Normal View</p>	

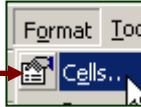



Rotating Text

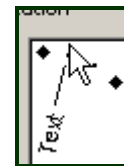
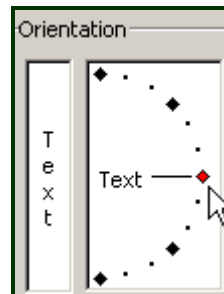
Open the file Personal Monthly Budget_A.xls

To rotate text in Cells C14:E14

	C	D	E
13			
14	Projected Cost	Actual Cost	Difference

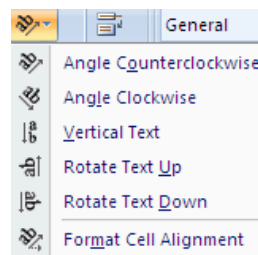
- Highlight C14, D14, E14
- Click on Format/Cells 
- Click the Alignment tab 
- Notice the red diamond under the orientation box
- Position cursor on the diamond, hold down mouse and move diamond to desired position

	C	D	E
14	Projected Cost	Actual Cost	Difference



OR

Click the **ab** icon under the on the Home/Alignment group

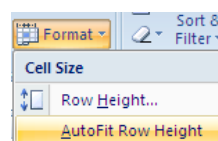


After rotating text, the row height will most likely have to be adjusted

14	Projected Cost	Actual Cost	Difference
----	----------------	-------------	------------

- Click the gray row number
- Click FORMAT/ AUTOFIT ROW HEIGHT

13	
14	



14	Projected Cost	Actual Cost
----	----------------	-------------

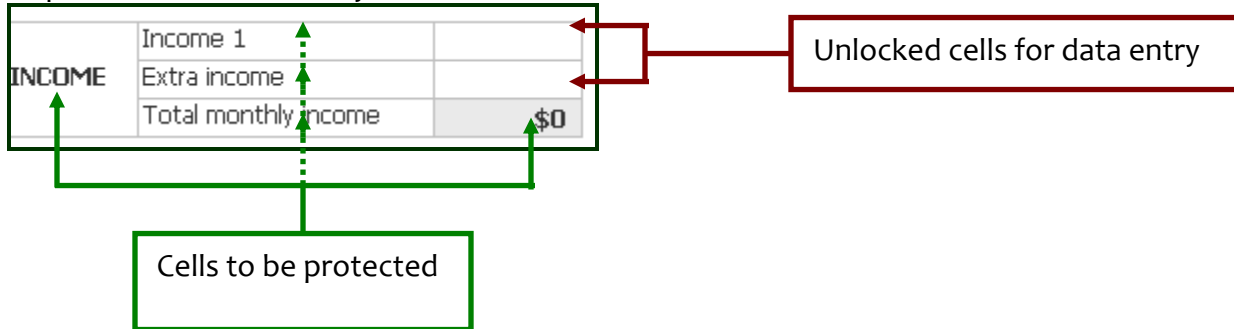


Protecting Cells in a Worksheet

Cells in a worksheet may be protected so users cannot "mess up" particular cells. Consequently, some cells may need to be unlocked so data can be entered.

Open the file [Personal Monthly Budget_A.xls](#)

In this file, the creator of the worksheet wants the user to be able to key in the cells that require data/numeric entry.





TO UNLOCK CELLS (THIS STEP MUST BE DONE FIRST BEFORE PROTECTING WORKSHEET)

Open the file Personal Monthly Budget_A.xls

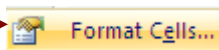
Use the CTRL key on the keyboard to select noncontiguous cells

Income 1	
Extra income	
Total monthly income	\$0

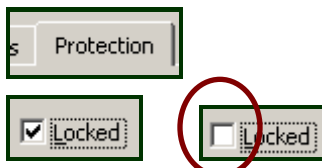
Income 1	
Extra income	
Total monthly income	\$0

Projected Cost	Actual Cost	Difference
		\$0
		\$0
		\$0
		\$0
		\$0

After cells are selected, click



- Click on the Protection tab
- Deselect/remove the checkmark in the box to the left of *Locked*

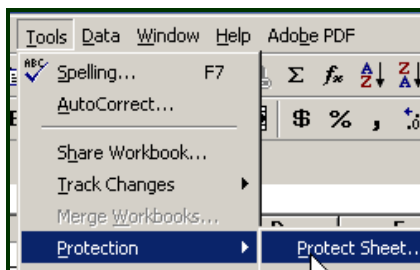


TO PROTECT THE WORKSHEET

To rotate text in Cells C14:E14

	C	D	E
13			
14	Projected Cost	Actual Cost	Difference

Click on TOOLS/PROTECTION/PROTECT SHEET





To View Gridlines

Open the file Personal Monthly Budget_A.xls

Some worksheets are received with the gridlines removed. The gridlines are the light gray lines, that by default, appear on worksheets.

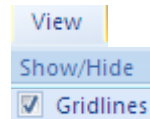
	A	B	C	D
1	These	are	gray	gridlines.

	A	B	C	D
1	These	are	gray	gridlines.
2	This	is	without	gridlines.
3				

TO REMOVE GRIDLINES

Click on

- View
- Show/Hide Group
- View gridlines
- Deselect or Select Gridlines, as desired

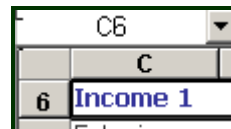


FORMAT PAINTER

To copy the formatting of a cell(s) to other cells

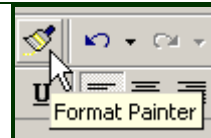
Format Cell C6 to

- Bold
- Point size 11
- Blue color
- Click green checkmark



To copy that formatting to multiple cells

- Double click on the format painter (the paint brush)


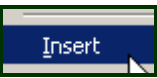
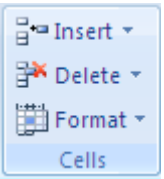





Once the format painter is double clicked, the user can also single click in other cells to copy the formatting rather than selecting several cells as shown above for rows 7 and 8




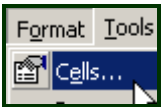
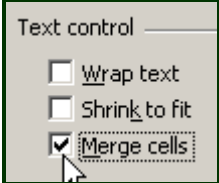

Inserting/Deleting Rows and/or Columns

Open the file Personal Monthly Budget_A.xls

<p>To insert a row above row 13</p> <ul style="list-style-type: none"> Highlight the gray 13 Right mouse click while pointing to the highlighted 13 Click Insert 	 	<p>ALTERNATIVE</p> 
<p>To insert a new column before column F</p> <ul style="list-style-type: none"> Click the gray column F identifier Right mouse click and select Insert 		
<p>To delete rows or columns</p> <ul style="list-style-type: none"> Click on the gray column identifiers (in this case F and G) Right mouse click and select Delete Follow same procedure to delete rows 	 	

Merge and Center Cells Vertically

Refer to Page 9 for merging cells horizontally

<p>To merge cells B6:B8</p> <ul style="list-style-type: none"> Select B6, B7, and B8 	
<ul style="list-style-type: none"> Click on FORMAT/CELLS 	
<ul style="list-style-type: none"> Click MERGE CELLS 	 



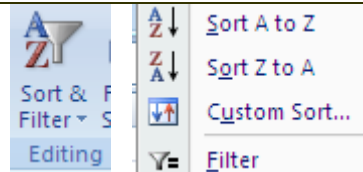
Sorting

SORTING ON ONE FIELD

The sorting information utilizes a file called **class list.xlsx**.

Sort field: name given to column to be sorted

Two "simple" sorts appear as icons on the Home toolbar. A custom sort can also be done, as well as expand the number of sorts.



IMPORTANT!

In Excel ALL columns must be selected when doing a sort. If only the column to be sorted is selected that is the ONLY column that may be sorted.

Worksheet BEFORE sorting

A	B	C	D
Last	First	Location	Position
Bennethum	Amanda	SUB	Substitute
Wirth	Deb	NS	Teacher
Worley	Diane	DE	Teacher
Spence	Franklin	WE	Teacher
Humphreys	Johanna	IS	Guidance
DiBlasi	Kristen	NS	Teacher

Worksheet AFTER doing an AtoZ sort on the last name column

A	B	C	D
Last	First	Location	Position
Humphreys	Johanna	IS	Guidance
Bennethum	Amanda	SUB	Substitute
Wirth	Deb	NS	Teacher
Worley	Diane	DE	Teacher
Spence	Franklin	WE	Teacher
DiBlasi	Kristen	NS	Teacher

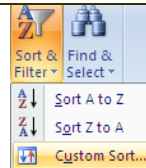


SORTING ON TWO OR MORE FIELDS

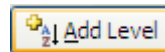
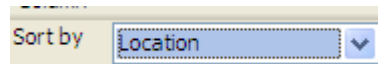
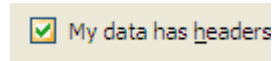
Click any cell within the desired range (or select the entire range), including column headings

A	B	C	D
Last	First	Location	Position
Bennethum	Amanda	SUB	Substitute
Wirth	Deb	NS	Teacher

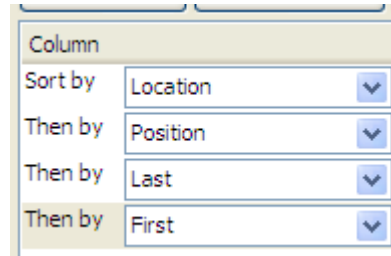
Click Sort & Filter/Custom Sort



- Be sure *Header* row is selected
- Select the first order of sorting
- Select whether it should be ascending (A to Z) or descending
- If other sorts, then click Add Level



This sample sorts first on *position* then by *Last name* and then *first name*

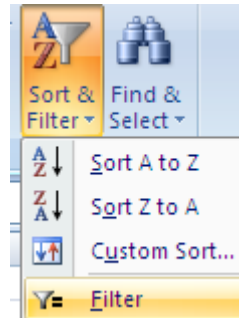




AutoFilter

Use AutoFilter to *temporarily* view designated criteria. This example utilizes the **class list.xlsx** file.

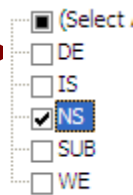
Click on Home/Sort & Filter/



First row of range will now have drop-down boxes

A	B	C	D
Last	First	Location	Position
Bennethum	Amanda	SUB	Substitute
Wirth	Deb	NS	Teacher

- To select all those from NS, click the _____ drop-down arrow key for Location
- Click on NS for North Salem
- All those associated with WE will now be listed



This example shows a filter done by location (NS)

A	B	C	D
Last	First	Location	Position
Wirth	Deb	NS	Teacher
DiBlasi	Kristen	NS	Teacher



Hyperlinks

A hyperlink is used to move from one location to another. It can be to:

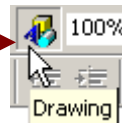
- A website
- Another document
- A position within the worksheet
- A worksheet within the same workbook
- Another workbook
- Another application (program)


HYPERLINKS WITHIN A WORKBOOK

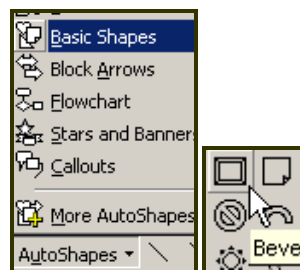
The hyperlink examples below and the following pages utilize the file called [QuizandGames.xlsx](#) and uses the TOC

Creating a Hyperlink on a Drawing Object

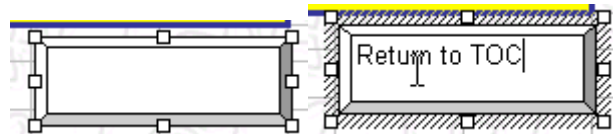
If the Drawing Toolbar is not displayed at the bottom click the icon



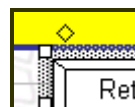
- Select the *True/False* worksheet
- Click in G5, approximately
- Click *AutoShape* and *Basic Shapes*
- Select the Bevel (4th row, 3rd icon)
- Move mouse to G5—mouse pointer becomes a plus sign  sign



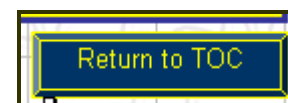
- Draw a rectangular shape that covers G and H, about 1 ½ rows deep
- Right mouse click and select *Add Text*
- Type [Return to TOC](#)



- Click on the border and the diagonal lines becomes dots
- Center, bold, whatever is desired



- The paint can can be used to fill
- The brush used to change line
- The **A** used to change color of text



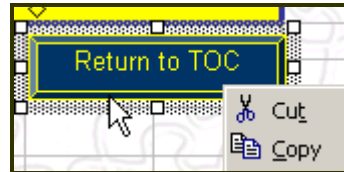
- Resize box as desired



It is recommended that a Return to TOC or similarly named button be placed on each page or section a link is created TO so the user can easily return to the place just left

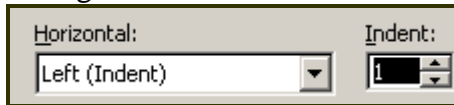
This hyperlinked box can be copied. However, it is more tricky to do so after a link is added:

- Right mouse click on the box
- Select copy
- Paste on any worksheets and locations the hyperlink is desired.



Hyperlinking from the TOC page to the named cells created on Page 43

- Type the desired information on the TOC worksheet (sample to right)
- The indented cells were obtained by:
 - clicking the green checkmark after keying A4
 - Clicking on *Format/Cells*
 - Selecting the *Alignment* tab
 - Setting the *Indent* to 1 for Horizontal



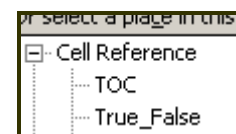
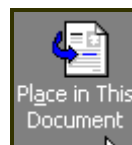
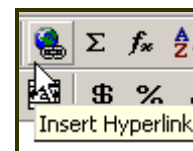
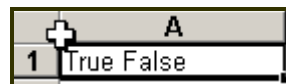
- Click in A4
- Click the paint brush (format painter)
- Copy that to A9:12

	A
1	True False
2	
3	Multiple Choice
4	Question 4
5	
6	Oral Quiz--Audio
7	
8	Quiz Directions
9	Anagram
10	Pyramid
11	Word Search
12	Number Grid
13	
14	Link to a Word Document
15	Link to a Web Page



Linking to the True-False Worksheet

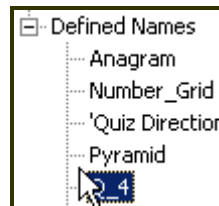
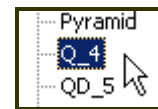
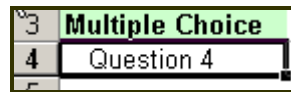
- Click A1
- Click the hyperlink icon
- Click *Place in this Document*
- Click *True_False* under *Cell Reference* since you want to go to the worksheet True False
- Click OK





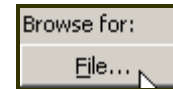
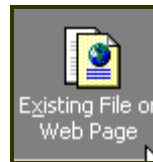
Linking to a specific cell (A18 or Q_4 named cell reference) on the Multiple Choice worksheet

- Click A4 on the TOC sheet
- Click the hyperlink icon (see above)
- Click *Place in this Document*
- Click Q-4 under *Defined Names*
- Click OK



Hyperlinking to an External Document (i.e. Word)

- Click in A14
- Click on the *hyperlink* icon
- Click *Existing File or Web Page* Icon
- Click *Browse for File*
- Select the desired file
- Click OK



By following the same steps above, a link can be created from the Word file back to the Excel file.

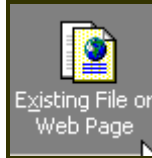
Links can also be made to files in other programs such as Access or PowerPoint.



Hyperlinking to a Web Page

- Click in A15
 - Click on the *hyperlink* icon
 - Click *Existing File or Web Page* Icon
 - Click *Browse for Web Page*
 - Go to that Web Page
-
- Once you are at the desired web page, click on the Microsoft Excel opened file on the task bar
 - The web page should appear in the white box below the *Type the file or web page name:*

15 Link to a Web Page



Type the file or Web page name:
<http://www.dover.k12.pa.us/doversd/site/default.asp>

Note: You can either browse (as above) or type in the URL as shown above

Try creating a link to an email address



- Pivot Tables

WHAT ARE PIVOT TABLES?

Pivot tables utilize data from your designated table(s) and allows the data to produce more meaningful information by dragging and dropping fields. Pivot tables are interactive because of the drag-and-drop feature. Pivot tables require trial and error. The results are shown immediately, so if something does not appear correct, just click Undo. **Keep in mind that the structure of the original table (the source) is not changing—so no harm can be done to the data.**

SOME USES FOR PIVOT TABLES

- Number of people with same name
- How many similar ZIP codes
- How many in a particular occupation
- Address for people within a particular ZIP code
- Which teachers requested a particular supply
- How many requests were made for a particular supply
- ...

GUIDELINES FOR PIVOT TABLES

- Data must be set up in a table (list) in a uniform manner
 - Data should be in columns
 - Row labels ARE NOT used
- Column headings for each column and at least two columns
- Headings
 - Must have headings
 - ALWAYS place in row directly above data
 - NEVER have blank row between data and headings
 - Make them distinct, such as bold
- Leave at least three blank rows above the headings
 - Can use these for formulas, if needed
 - Can hide rows if desired
- If more than one list or table on same worksheet, leave at least one blank column between the list and/or table. If, however, the tables/lists are related to each other combine them into one large table.
- Avoid blank cells within the data
- Sort list or data, preferably by left most column. This does not affect Pivot Table but makes it easier for person reading the data.



CREATING A PIVOT TABLE

This sample utilizes a **Supplies.xls** file

Some questions that you may want to ask about the supplies:

- What is the total of various supplies requested to date?
- How many supplies has a particular staff person requested?

	A	B	C	D	E
1	Staff Initials	Supply Code	Quantity	Item Description	Staff Person
2	ilp	1	5	Bic Pen Medium--Blue	PLANK
3	ilp	1	2	Bic Pen Medium--Blue	PLANK
4	amm	2	5	Bic Pen Medium--Red	MCWILLIAMS
5	sjs	2	6	Bic Pen Medium--Red	SMITH
6	bas	2	2	Bic Pen Medium--Red	STRAUSBAUGH
7	jam	5	2	Bic Pen Fine--Black	MILLER, J
8	bas	5	3	Bic Pen Fine--Black	STRAUSBAUGH
9	jam	7	10	Notebook paper--ream	MILLER, J
10	jam	8	3	4x6 index cards--pack	MILLER, J
11	ilp	9	25	folders	PLANK
12	amm	10	2	steno pad	MCWILLIAMS
13	amm	10	5	steno pad	MCWILLIAMS

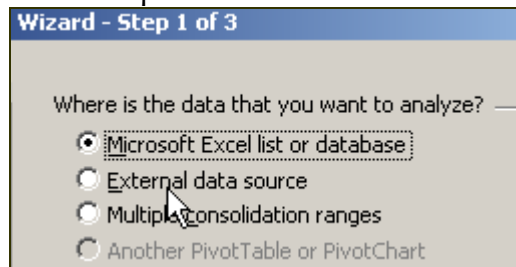
Pivot Table Wizard

- Click in worksheet where data is located
- Click on Data on the menu tab
- Select PivotTable and PivotChart Report



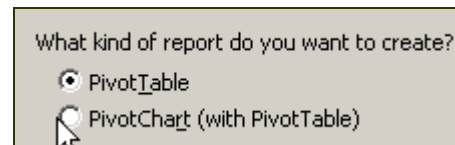
STEP 1 OF 3

Select the location of the data, most likely the first option



Click Next

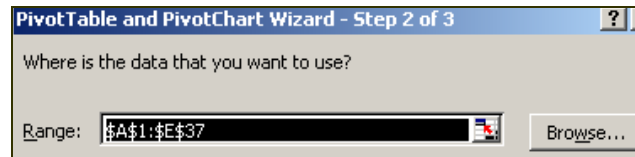
Select type of report to be generated





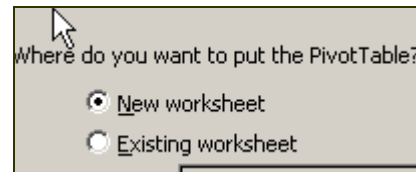
STEP 2 OF 3

IF the data range is different than what was automatically selected at Step 2 of 3, change the range



STEP 3 OF 3

Until you are more familiar with Pivot Tables, it is best to put the table on a New worksheet

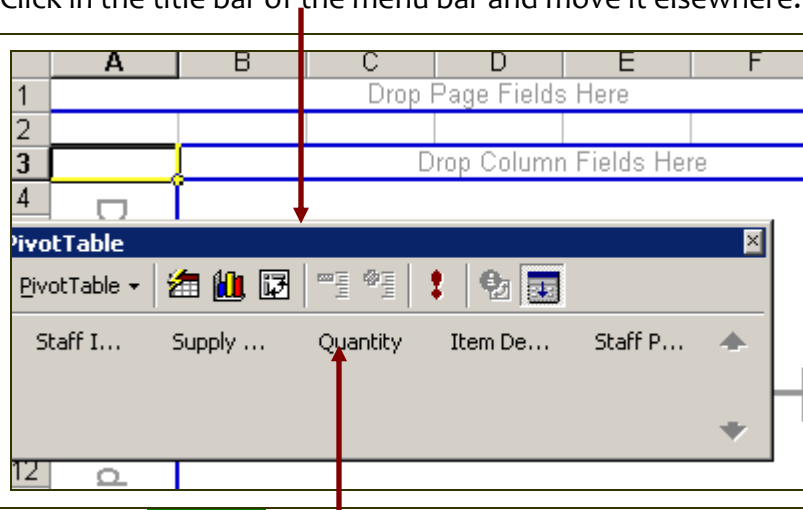


Click Finish



Assembling the Pivot Table

A blank PivotTable report appears on a new worksheet. However, the menu bar may appear over the table. Click in the title bar of the menu bar and move it elsewhere.



The "column headings" or **field lists** also appear on the PivotTable menu



Drop Page Fields Here

Displays ONE data item by which all table values are filtered

Drop Page Fields Here

Drop Column Fields Here

Drop Row Fields Here

Drop Data Items Here

Displays values and calculations

Items shown in individual rows

- Drag fields from FieldList to desired areas on PivotTable report
- To remove a field from the PivotTable report, simply drag it back off



Experiment! Experiment! Experiment!

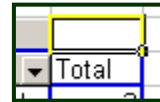


Sheet containing the data

	A	B	C	D	E
1	Staff Initials	Supply Code	Quantity	Item Description	Staff Person
2	ilp	1	5	Bic Pen Medium--Blue	PLANK
3	ilp	1	2	Bic Pen Medium--Blue	PLANK
4	amm	2	5	Bic Pen Medium--Red	MCWILLIAMS
5	sjs	2	6	Bic Pen Medium--Red	SMITH
6	bas	2	2	Bic Pen Medium--Red	STRAUSBAUGH
7	jam	5	2	Bic Pen Fine--Black	MILLER, J
8	bas	5	3	Bic Pen Fine--Black	STRAUSBAUGH
9	jam	7	10	Notebook paper--ream	MILLER, J
10	jam	8	3	4x6 index cards--pack	MILLER, J
11	ilp	9	25	folders	PLANK
12	amm	10	2	steno pad	MCWILLIAMS
13	amm	10	5	steno pad	MCWILLIAMS

A sample PivotTable displaying the total requested of each supply.

Note that in this example the *column field* was not used.



	A	B
2	Staff Person	(All)
3	Sum of Quantity	
	Item Description	
5	4x6 index cards--pack	3
6	Bic Pen Fine--Black	5
7	Bic Pen Medium--Blue	7
8	Bic Pen Medium--Red	18
9	folders	25
10	Notebook paper--ream	10
11	steno pad	7
12	#N/A	
13	Grand Total	75
14		

Page field points to the Staff Person field in row 2.

Rowfield—lists each supply item points to the Item Description field in row 3.

Data field—sums each supply; the "function" can be changed points to the Sum of Quantity field in row 3.

Information on Pivot Tables taken, in part, from:

Tips for Working with PivotTable Technology in Excel 2002, <<http://www.microsoft.com/office>>

Pivot Tables, <http://www.ozgrid.com/Excel/excle-pivot-tables.htm>